



Service Priorities and Programmes
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Hypoglycemia Initiative: A Retrospective Review on Diabetic Patients Hospitalized for Hypoglycaemia in A Regional Centre

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Introduction

More than 200 diabetic patients were admitted to Caritas Medical Centre every year due to severe hypoglycemia. Iatrogenic hypoglycemia causes significant morbidity and impairment of quality of life in people with diabetes and is associated with increased mortality. Recent international guidelines recommend individualization of glycemic target while the risk of hypoglycemia emerges as an important consideration factor.

Objectives

We performed a retrospective review to examine the clinical profiles of patients who were hospitalized for severe hypoglycemia and to identify the service gap in the management of diabetic patients with incident hypoglycemia.

Methodology

We identified all patients admitted to Caritas Medical Centre for hypoglycemia from 1st November 2015 to 31th October 2016 by the Clinical Data Analysis & Reporting System (CDARS). Their records were analyzed retrospectively. Data on baseline characteristics, reasons for hypoglycemia, inpatient and discharge management, recurrent admission and mortality rate were recorded. Factors associated with mortality were examined.

Result

We identified 218 diabetic patients who were admitted for hypoglycemia during the study period. Their mean age was 76 with latest mean HbA1c level of 7.1+/-1.6%. The average duration of diabetes was 17±10 years and 46.8 % of patients was on insulin therapy. Co-morbidities including ischemic heart disease (27.5%), stroke (51.4%), chronic kidney disease (39.4%) and dementia (25.2%) were common. The major reasons for hypoglycemia were too stringent glycemic control (33%) (A1c < 6.5%), meal omission or decreased intake (42%) and intercurrent infection (11%). The readmission rates within 28 days and 2 months were 8.2% and 12.4% respectively, mostly due to recurrent hypoglycemia. The annualized mortality rate was 17.4%. The number of co-morbidities were positively associated with mortality at one year ($X^2=10.1$, $p=0.038$). Review by dietitian and diabetes nurse were present in 25% and

30% respectively. None of the patients had explicit glycemic target in terms of HbA1c upon discharge.

Conclusion:

Patients hospitalized for severe hypoglycemia had significant comorbidities and high mortality. Dietitian service and diabetes nurse service, which might help address some of the major reasons of hypoglycemia such as meal planning for meal omission and sick day management for intercurrent infection, were under-utilized.

Individualized glycemic target should be incorporated in the care of these patients. A multifaceted model comprising these features would theoretically improve the clinical outcomes of people at risk of severe hypoglycemia and should be tested.